

The research of teachers' demands for professional instruction

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ABSTRACT: Studying vocational school teachers' opinions of the new vocational education curriculum, and undertaking research on their demands for professional instruction can serve as a criterion for enhancing new vocational education curriculum reforms. Thus, this study collects data by text analysis and in-depth interview, and conducts data analysis by critical incident technique (CIT). The findings indicate that when encountering a new vocational education curriculum, vocational school teachers' professional instruction requirements refer to curriculum planning, instructional planning and professional growth. The requirements for curriculum planning are upon the presentation of instructional materials and approaches. The demand for instructional planning refers to learning evaluation and resource management. The demand for professional growth refers to the competition of teachers' practical groups, experience sharing of instruction and learning and the construction of a new curriculum information platform. Four possible methods are suggested that will help teachers avoid formulating reform definitions that are not aligned with the vision and goals of the new curriculum.

INTRODUCTION

In the past, curriculum criteria and specific courses of vocational education curricula in Taiwan were constructed by the government. However, upon the concept of school-based operations, the Ministry of Education partially authorised vocational schools regarding school-based development. In 1998, a new vocational education curriculum reform was launched in Taiwan. The draft was established in 1999, and opinions collected in public hearings since 2001. In 2006, the Provisional Curriculum Outline for Vocational Schools (Curriculum Outline 2006) was completed, and a modified curriculum outline (Curriculum Outline 2009) was announced in 2009 for formal implementation in 2010. The Curriculum Outline 2006 aimed to allow vocational schools to construct over 40% of school-based courses according to the students' demands, teacher sources and location characteristics. The schools could transform their academic systems, adjust their courses or develop curriculum. For vocational school teachers, compared with the old curriculum from 1998, in Curriculum Outline 2006, with regard to the credits of *courses specified by Ministry of Education*, the credits for general courses were increased, and those for *professional courses* were reduced. As for *school-based courses*, 40-50% of the elective courses were increased, and the schools constructed the courses and instructional outlines [1].

The influences of the implementation of the Curriculum Outline 2006 on vocational school teachers' professional instruction have been as follows: 1) Vocational school teachers' instructional courses and hours are significantly lower, and these teachers should have advanced study in secondary skills or instruct courses in which they are not specialised, thus resulting in a *de-professionalised* phenomenon; 2) In the new vocational educational curriculum, vocational school teachers undertake over 40% of credits in the school-based professional courses, in addition to the core curriculum of professional courses. The teachers must establish the instructional outlines and instructional materials, which demands significant curriculum development skills and design abilities; 3) In *Specified courses of the Ministry of Education*, the credits of *general courses* are increased, and the function of vocational education is reduced for vocational school students. Moreover, in the examination of four-year and two-year colleges, the proportion of vocational courses has declined by 20% and the number of vocational students has become inferior to those attending higher schools [1][2]. This study aims to probe into business teachers' demands for instructional professional development with regard to the Curriculum Outline 2006 of the new vocational educational curriculum in order to meet the promotion of school-based curricula effectively, enhance sustainable operations of schools and function as the criteria for the development of the 2010 new vocational educational curriculum.

Based on the motivations above, the research purposes are:

- To analyse differences between items of teachers perceived demands for professional instruction.

- According to the findings, this research proposes suggestions regarding the expectations of teachers' professional development toward high-quality instruction.

METHODS AND IMPLEMENTATION

Data collection for this study is based on the websites of businesses and management centres of the vocational curriculum network, the Department of Technological and Vocational Education of the Ministry of Education, annual reports of school suggestions from the curriculum centre, public hearings, suggestions of promotional conferences of schools in different regions and conferences of committees. The data were collected from January 2000 to June 2009, with 238 pieces of data being collected. The encoding was based on the instructional ability index [3].

The construction of the node system included 486 items, and text analysis was based upon the critical incident technique (CIT). As shown in Figure 1, vocational school teachers' perceived demands for professional instruction in the new vocational education curriculum were teachers' professional development (including study, competition, communities and design of instructional materials), and there were 80 requests. *Project Work* curriculum instruction (samples of instructional materials, additional grades for advanced studies and group instruction) involved 78 requests, while the instructional materials information platform included 71 requests. Early release of the examination scope of the courses included 68 requests, curriculum guideline publications and public hearings involved 57 requests, design of instructional materials for new courses included 56 requests, encouragement of design of instructional materials (project subsidy and reduction of instructional hours) included 25 requests, increase of instructional hours of professional courses included 14 requests, and demand for software and hardware facilities included 13 requests.

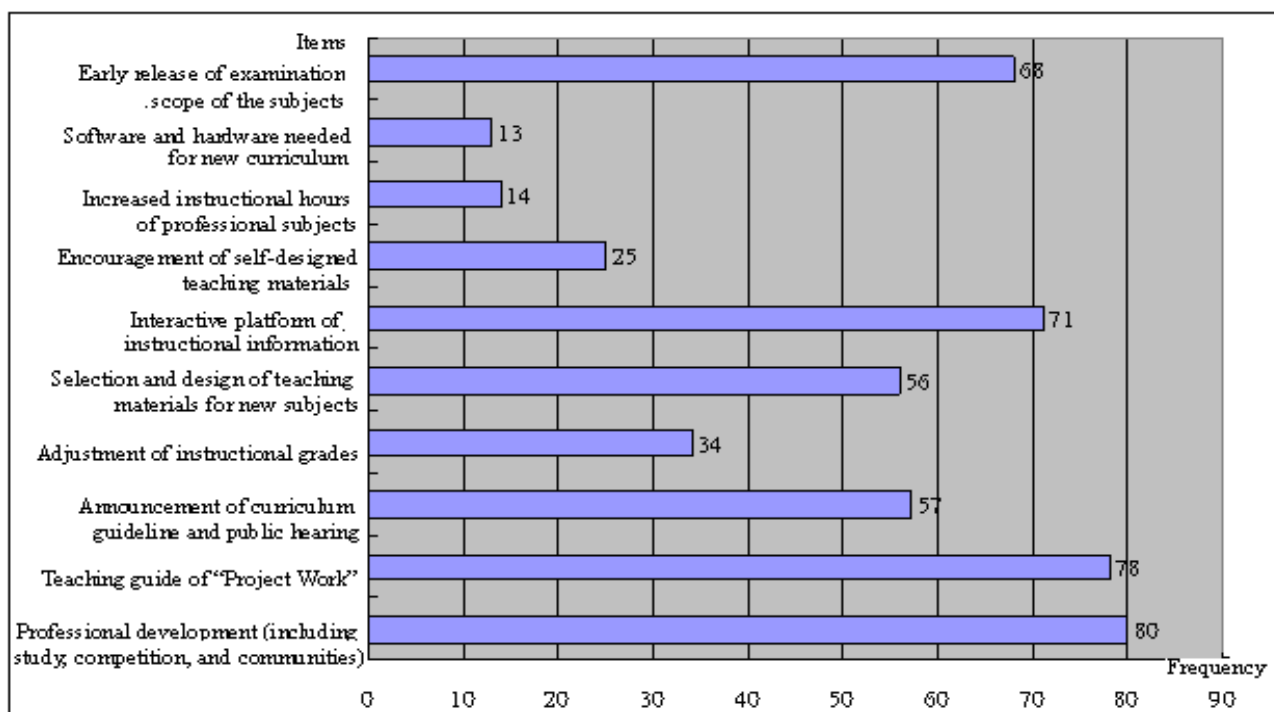


Figure 1: Distribution of vocational school teachers' perceived demands for professional instruction of the new vocational education curriculum.

Six vocational school teachers were interviewed for this study, including two full-time teachers, two teachers with administration work in curriculum centre, and two full-time guide teachers. The interview aimed to probe into the teachers' perceptions of fulfilment for professional instruction in the new vocational education curriculum. The interviews lasted for two to three hours, where the researcher collected the targets' data and conducted the interviews according to the outline and plan.

With the participants' agreement, the researcher recorded the interviews. The reorganisation of targets, personal background, and codes are discussed elsewhere. Interview data were based upon *modified analysis* for reorganisation and analysis. This study conducted conceptual analysis and encoding of the qualitative analysis, and analysed the similarities and differences of the data by *constant comparative analysis*. The results were compared with literature, and the findings were generalised. Two coders validated the reliability by the *coder reliability approach*, and reliability was 0.89 [4].

RESULTS AND DISCUSSION

Teachers' Eager Demand for Curriculum Professional Development of *Project Work*

Upon data analysis, this researcher realised that vocational school teachers' demands for professional instruction in the new vocational educational curriculum refer particularly to curriculum planning, instructional planning and professional growth. Using instructional materials as an example, the teachers' demand for an instructional resource platform, study competitions and professional growth, including prior release of the courses, scope of entrance examinations in advance, announcement of curriculum outline and public hearings all demonstrate the teachers' demands for curriculum planning and instructional planning.

With regard to the teachers' professional instruction, curriculum reform tends to construct new teachers' personal value orientation and belief through their subjective feelings, and the processes of interpretation and understanding significantly affect the teachers' professional practices and developments. The teachers' demands for curriculum reform include hosted study and description of new curriculum, training of seed teachers and professional curriculum, demonstrations by the colleague communities and information for professional growth. Thus, in new vocational educational curricula, vocational school teachers should be active in establishment, and continuously modify and construct their knowledge structure. Professional instruction aims to guide the teachers to discover or accept a meaningful new concept to replace the old one, which could further change their cognition and enhance learning [5].

Teachers' Demand for Instructional Guidance and Resources of *Project Work* Curriculum

In new vocational educational curricula, vocational school teachers' demands for professional instruction, with regard to curriculum planning, refer to the presentation of instructional materials and instructional approaches. As to instructional planning, it refers to learning evaluations and resource management. Teachers' recognition of the belief and change direction of the new vocational educational curriculum will enhance their responses and measures. As to the teachers' professional instruction, new teachers' early personal values and beliefs are upon subjective feelings, interpretations and understanding, which would significantly influence the teachers' professional practices and developments. With regard to new vocational educational curricula, when vocational school teachers have *de-professionalised* questions, it will influence the teachers' perception of professional practices, as well as their alignment of values, needs and emotions of professional instruction [5].

In the process of curriculum reform, the teachers should enhance their professional ability, their self-growth ability is the most significant and their evaluation ability is inferior. Their problems refer to the adaptation of school-based curriculum instructional materials, their ability to design integrated curricula, use of resources outside of school and invitations from others to participate in the evaluation. With regard to curriculum reform, the teachers' ability to incorporate grades, student related academic knowledge and to develop instructional materials should be further enhanced [6][7].

Teachers' Demands for Professional Growth of Instructional Information Platforms

Teachers' demands for professional growth refer mainly to the competition with other teacher communities, experience sharing of instruction and learning, and the construction of a new curriculum information platform. With regard to the teachers' cognition of professional instruction in curriculum reform, the teachers interpret the surrounding and form a framework of problems to construct their instructional content and meaning, in order to establish the *concept* of the curriculum further [8]. Through personal subjective feelings, interpretations and understanding of the instructional processes, the teachers construct their personal value orientation and beliefs, which would affect their professional instructional practices and developments, which are the key factors of a teacher's professional practical theories, and significant drivers of their professionalism [4][5]. Strike and Posner suggested four cognitive conflicts upon the significantly changed cognition of instructional processes: 1) teachers are not satisfied with current concepts, and would reconstruct the knowledge structure through instruction and learning; 2) teachers discover new concepts to solve instructional problems; 3) teachers have primary recognition of the new concept; and 4) teachers affirm the effectiveness of the new concept [6].

Sharing the Students' Learning Results

Sharing the students' learning results, and students' and teachers' experiences, should be included in the promotion of the new vocational educational curriculum. Teachers' cognition of professional instruction includes the construction of teachers' instructional knowledge and experiences, and the teachers should have belief and motive to solve problems through effective instruction; the teachers should be assisted in learning how to use the clues and effective instructional strategies [7][9]. Promotion of the new vocational educational curriculum and sharing of students' learning results, and students' and teachers' experiences, would influence the teachers' belief in the new vocational educational curriculum. Through demonstrations, teachers could adjust their instructional materials and schedule according to the direction of school-based courses. Upon the systematic design of an instructional resource platform, practice-oriented activities and technique-based instructional strategies, the teachers could recognise the various textbooks, prepare and select teaching materials, design instructional plans, develop instructional materials, and design tests, instructional skills and instructional practice, which would all be enhanced with regard to the new vocational educational curriculum.

CONCLUSIONS AND RECOMMENDATIONS

Enhancement of Vocational School Teachers' Instructional Preparation Competence and Upgrading of the Transformation and Practices of Instructional Concepts of the New Curriculum

The schools should instruct vocational school teachers to collect data related to the new vocational education curriculum, host meetings for related descriptions and enhance the construction of professional instructions in order to allow vocational school teachers to recognise the new vocational educational curriculum. Besides current industrial situations and future developmental trends, curriculum philosophy, learning psychology, social and economic theoretical bases should be valued in order to plan adaptive instructional materials of the new vocational educational curriculum.

Enhancement of Vocational School Teachers' Professional Abilities and Design Skills for Instructional Materials of the New Curriculum

Because of the pressures of competition, and with regard to current teachers' needs for advanced studies, related units should develop complete educational systems for teachers' use. The teachers should be invited to participate in studies of the new vocational education curriculum in order to enhance their professional consciousness, cultivate their habits for advanced studies, and further construct a professional image for curriculum reform and new instructional models. The teachers should be made aware of the new opportunities as these are critical issues in regard to teachers' professional instruction.

Cultivation of Vocational School Teachers' Reflective Instructions and Learning Abilities

Vocational school teachers value academic knowledge in *Project Work* curriculum arrangements, the resulting presentations, as well as educational objectives and characteristics of vocational schools. They significantly demand demonstrations and study results of *Project Work*. The schools could hold related studies, allow teachers to adjust the instructional design according to their reflection results and design instructional activities of *Project Work* through discussions, colleague observations, field studies, case studies, observations and interviews. Upon the feedback of reflective instruction, teachers' professional instructions could be enhanced through self-reflection and professional exchange among educators.

Enhancement of vocational school teachers' perceived expectations of the new curriculum and instructional adjustment ability relies on the teachers' self-reflections, professional academic knowledge and rich instructional experiences.

By using competence-based instruction, conceptual thinking, collective thinking, ladder practice-oriented instruction, and varied instructional strategies, the schools could enhance vocational school teachers' educational professional knowledge and allow them to establish professional quality by rich education and professional knowledge, enabling them to be well prepared for the work place.

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